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### Abstract

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The new requirements and needs of Algerian higher education system in today's fast changing world is more oriented towards developing students' 21<sup>st</sup> century learning skills known as the 4 Cs: Creativity, Critical thinking, *Collaboration and Communication. Creative thinking is undoubtedly a kev* characteristic of life skills that educationalists and language teaching practitioners strive to nurture in students. The main pursuit of the present study is to describe how EFL pre-service teachers at ENSB perceive creativity in their learning process. It is also an attempt to explore their perceptions about stimulants and impediments for the development of creative thinking in the classroom environment. To fulfill the purpose of this small scale study, a questionnaire was administered to fifty-seven preservice EFL teachers (fifth year students) from the English department of ENSB, Algiers. The findings reveal that pre-service teachers have a clear understanding of creativity. However, poor knowledge is noticed regarding creative thinking sub-skills. The findings also suggest that in order to stimulate creative thinking in higher education, teachers should be able to create a motivating atmosphere which accepts thinking out of the box, provides students with alternatives, constructive feedback and boosts their self-confidence. On the other hand, in an environment which inhibits creativity, perspectives are ignored, new ideas are rejected and teachers are controlling. The study, therefore, calls for the implementation of creative thinking in EFL curriculum as essential learning and life skills.

Key Words: Creativity, Critical thinking, Skills, novelty.

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# Introduction

Creativity and critical thinking are crucial skills that are needed to cope with the dynamics of future challenges. Algerian higher education system is in a constant state of reform; as a matter of fact, the new requirements and needs are more addressed to developing students' competencies. A special focus is given to enhancing creative thinking skills. At ENSB, EFL teachers are more oriented towards helping pre-service teachers generate new and imaginative ways to understand and evaluate ideas about different subject contents they are studying.

The purpose of this small scale study is to describe and investigate the understanding of creative thinking among the secondary school pre-service teachers at ENSB.

The study aims at finding answers to the following two questions:

- What are pre-service teachers' understandings of creative thinking?
- What are the perceived stimulants and impediments of creative thinking according to secondary school pre-service teachers?

To begin with, it is deemed necessary to draw a clear distinction between creativity and critical thinking. Critical thinking is defined as being "an analytical, evaluative process in which an individual makes judgments on the basis of norms of standards that have been developed through experience" (King,1968, p.3). Engaging in critical thinking involves a number of attitudes and skills. This means that a student who activates his critical thinking (1) shows an open, analytical attitude toward experience, (2) holds the knowledge and skills needed to fully grasp the meanings under consideration, (3) is able to not only follow the organization or logic of the material, but also perceiving and accepting omissions and irrelevancies, (4) considers the reliability and competence of the source information, or product, and (5) puts up judgment until all essential data have been secured (King, 1968). What about creative thinking?

Creativity is omnipresent in different aspects of human life. It is the process of making connections and is related to novelty and productivity. Creativity is about making something new from those connections (Gardner, 1993)

The process of thinking critically involves problem recognition and analysis, clarification of meaning, collecting the evidence, evaluating the evidence, inferring conclusions, considering other related information, and making an overall judgment. Thus, critical thought becomes crucial to the ethics of education (Siegel, 1980; Hitchcock, 2011). Indeed, critical thinking encourages learners to engage in deep and creative reasoning and is generally conceptualized as being directly related to

constructive questioning (Cuccio-Shirripa and Steiner, 2000). This leads us to believe that creativity and critical thinking are inter-dependent and thereby, the development of students' abilities to ask questions, reason, problem solving, and think critically and creatively should become a central focus of education reform (Zoller et all,1997). Critical thinking teaches students to interrogate claims and look for truth while creativity teaches students to think in a way that is distinctive and special to them. In the same line, Hellens (2020, p.4) claims that "Creative thinking is usually placed higher on thinking taxonomies as it involves the use of critical thinking to then assess and provide a new perspective".

It is to be noted that the creative process includes an original way to produce uncommon ideas, to make various combinations, or to add new ideas to already existing knowledge (Fleith, 2000). Taylor (1975) provides a practical framework in order to examine the various possibilities for creativity in everyday teaching. According to him, creativity can be expressed in five levels:

The first level is *expressive creativity*. It relates to acting without any prior preparation or thinking in advance. It is the spontaneity in speech. The best example of this type of creativity is impromptu speaking. In education, expressive creativity is illustrated in the huge involvement of learners in the co-creation of teaching and learning.

The second level is the *productive creativity*. This is exemplified in the learners who make connections between different topics and repeatedly and consistently accomplish unexpected outcomes.

The third level is *inventive creativity*, and this relates to integrating new elements and ideas to solve problems. Teachers who bring changes in teaching and learning activities and enhance their learners' creativity demonstrate inventive creativity, and students who develop original skills in inventing solutions to novel problems also possess inventive creativity.

The fourth level concerns the *technical creativity*, and it is distinguished by the ability and skill in creating new products.

The fifth and last level is related to *emergent creativity*. This involves rejecting existing theories and building new ones. According to Taylor (1975), this level is the highest one and only outstanding and '*genius*' people can reach it.

## Method

The present investigation is a case study using a mixed methods approach which combines qualitative and quantitative methods of data collection. Data were collected

at Ecole Normale Superieur de Bouzareah (Algiers) during the academic year 2021-2022. The sample is made of 57 pre-service EFL teachers (5<sup>th</sup> year students) from the department of English. In order to collect the data and meet the objectives of the study, two research instruments were used:

- A close ended-questionnaire administered to the pre-service EFL teachers to collect data on their understanding of creativity and creative thinking.
- A semi-structured interview to gather data on the stimulants and obstacles of creative thinking.
- The questionnaires items and the semi structured interview were adapted from (Nedjah & Hamada (2017); Messadah, 2021)

### Results

This section focuses on the results obtained from the data analysis of the questionnaire.

### Teachers' Understanding of creative thinking

In order to answer the first research question and explore the pre-service teachers' understanding of creative thinking, a list of 16 sub-skills related to creative thinking were offered to them and they were required to depict those which, in their opinion, are associated to creative thinking.

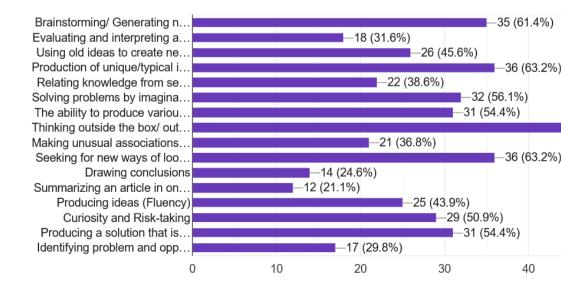
The results reveal the number of skills that each participant has chosen. For instance, three pre-service teachers have selected the sixteen sub-skills and 1

has opted for 15. The choice of 9 other participants varied between 10 and 13 skills. 23 pre-service teachers identified between 9 and 6 sub-skills while 13 between 5 and 3. Finally, 3 believe that among the 16 sub-skills only 1 is related to creative thinking. The results reveal clearly that all the participants have an idea of what creative thinking is as there is no participant who has not selected at least one sub-skill among the sixteen presented to them. They seem to know that creativity is related to questioning, creating new ideas and looking at things differently.

The findings unveil that only 3 pre-service EFL teachers could recognize the 16 creative thinking sub-skills while 28 out of 57 students are confused and identified less than eight sub-skills. It may be argued that more than 50 % of the pre-service secondary school teachers are uncertain about their knowledge and are consequently described as having a poor understanding of creative thinking sub–skills which is, to a great extent, disappointing. Despite the fact that that they appear to know the meaning of creativity, the pre-service teachers seem to ignore many of the sub-skills related to this important

metacognitive skill. This may be due to the fact that creative thinking is not explicitly implemented in higher education which cause students to ignore the main components of this important skill.

The graph below displays the main sub-skills that most of the participants identified as being the creative thinking sub-skills along with the least identified ones.



The data illustrated in the graph above demonstrate that the overwhelming majority of the participants understand that creative thinking is mainly related to thinking outside the box, generating new ideas, seeking new ways of looking at problems, producing a solution that is both novel and suitable added to curiosity and risk-taking. On the flip side, they seem to be confused about the other characteristics related to creative thinking subskills such as: Summarizing an article..., drawing conclusion, identifying problem and opportunity, making unusual associations and evaluating and interpreting an idea.

#### Pre-service EFL teachers' perceptions of creative thinking

With respect to the perceived stimulants and obstacles of creativity, the secondary pre- service teachers advocate that there are certain criteria which can enhance or impede the learners' creative thinking in EFL environment. These are summarized as follows:

#### a-Stimulants that boost creativity in EFL context

In order to cultivate a creative environment and encourage innovative thinking, the students and pre-service teachers suggested different stimulants that are grouped in terms of three categories:

#### **1-Psychologcal stimulants**

The pre-service EFL teachers believe that creative thinking is enhanced when teachers realize that students are not empty vessels, when they are not judged and their differences are embraced and accepted. They are convinced that when things are not imposed on students and when teachers reward and praise their learners' creativity, this will definitely help students develop their creative thinking. All the interviewed pre-service teachers identified the tolerance of mistakes as an important asset to create a comforting environment.

#### 2-Socio-cognitive stimulants

The fifth year participants reveal that when teachers are open to new ideas, and students are given the space to express themselves, exchange ideas and give their opinions, learners' creative thinking is nurtured. Besides,

allowing students to work in groups, interact with their peers and providing them with creative activities were also mentioned to enhance classroom creativity.

# **3-Metacognitive stimulants**

The participants' responses reveal that they believe that boosting learners' creative thinking is closely related to encouraging them to come up with original ideas and use their imagination. It is also associated with encouraging curiosity along with giving them time to ask questions. In addition, they advocate that allowing students to think out of the box (i.e. creatively) to solve or find solutions in variety of ways goes hand in hand with guiding them to be autonomous and 'not spoon-fed'.

## b- Obstacles of creativity in EFL context

Regarding the obstacles of creativity in EFL classroom, the pre-service EFL teachers believe that creative thinking is inhibited when: students' mistakes and wrong answers are not allowed. Creativity becomes a complex ability when the teacher is the controller

of the classroom and the only source of knowledge. Besides, when lessons are presented in a monotonous and mundane manner and when there is no interaction between students and the teacher, students become passive learners which prevents them from thinking out of the box (creatively). The findings also reveal that creativity is held back when ideas are imposed on students, when teachers make fun of the students' answers and when new ideas are negatively judged. Creativity is without any doubt obstructed when production is not praised and students continuously receive destructive feedback.

# Discussion

A detailed analysis of the findings displays the following:

Regarding the first research question, the pre-service language teachers show a clear understanding of what creative thinking is. This is probably because they have got into a habit of believing that creativity is related to coming up with something never thought of before. The participants in this small scale study seem to agree with Borden (2004) who advocates that creative thinking is intrinsically related to making "creative", "new", "surprising" and "valuable" solutions. However, they fail to consider many of its sub-skills such as analyzing, summarizing, organizing, making

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associations, evaluating, thinking flexibly, comparing, exploring, taking actions, combining and scrutinizing. The ignorance of the main creative thinking sub-skills may also be explained by the fact that creative thinking is not explicitly taught. Indeed, it is neither overtly developed as an important social skill nor specifically incorporated into higher educational teaching. Although creative thinking is highly recommended and required, the educational system still rely on traditional methods. This is noticed in most higher educational assessments which are still summative in nature and are more oriented towards the evaluation **of** learning rather than adopting the new learning oriented assessment framework (LOA) which main objective is assessing **for** learning.

Concerning the second research question and in relation to the stimulants of creative thinking in EFL context, the pre-service teachers' responses reveal that they are quite aware of the main learning environment aspects which foster creative thinking. The enhancement of creativity is described in three inter-related categories. The participants are convinced that creative thinking can be developed when the psychological, social, cognitive and meta-cognitive components of thinking are given importance. For any creative action to be successful, teachers ought to create a motivating and comfortable environment where students are given positive and constructive feedback on their creativity. Teachers should encourage learners to try out new ideas and allow them to make mistakes. In addition, pre-service teachers believe that their teachers have to promote creative thinking through encouraging autonomy and by the same token building brainstorming sessions. This will definitely boost their creative thinking skill.

Regarding the main obstacles that forbid the development of creative thinking, the participants believe that there are many barriers to creativity among which is the lack of opportunities for creative expression. There is also emotional block manifested by dependent thinking where ideas, knowledge and thoughts are guided by the authoritarian and controller teacher who does not allow his students to think out of the box. As a matter of fact, learners rely on old ideas and feel embarrassed to express new ones.

#### **Conclusion and recommendations**

There is no doubt that creative thinking is an invaluable skill which makes it at the peak of attention by educators and researchers in social studies

education. Indeed, creative thinking is the key characteristic of life skills that educationalists in general and language teaching practitioners in particular strive to cultivate and nurture in students.

As a matter of fact, future research studies are needed to shed light on the effects of English language learning on students 'creative thinking skills

Teachers are recommended to allow their learners to express themselves freely when interacting with their peers in order to help them develop their creative thinking.

Language teachers are vividly required to create a comfortable and safe learning environment so that learners can develop their creative thinking skill. This is confirmed by Drapeau who states that "Students will make it a habit to express their creativity in an environment where they feel encouraged to do so" (2014, p.13). То conclude, the study calls for the implementation of creative thinking in EFL

curriculum as essential learning and life skills.

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